

What is claimed is:

1. An image forming apparatus comprising:

at least one replacement part including a storage medium that can store information and into which identification information inherent to the replacement part is written; and

an apparatus main body to which the replacement part is detachably mountable and which includes:

a communication unit that serves to communicate the information with the storage medium of the replacement part;

an information acquisition unit that, based on the identification information obtained from the storage medium of the replacement part through the communication unit, acquires information on the replacement part from a storage unit provided to an element other than the replacement part; and

a management unit that manages a usage state of the replacement part in accordance with the information on the replacement part acquired by the information acquisition unit.

2. An image forming apparatus according to claim 1, wherein the identification information is different for each replacement part including the storage medium.

3. An image forming apparatus according to claim 1, wherein the identification information is a consecutive number imparted

to each predetermined step.

4. An image forming apparatus according to claim 1, wherein the identification information written into the storage medium cannot be rewritten.

5. An image forming apparatus according to claim 1, wherein the information on the replacement part corresponding to the identification information is stored in a storage unit provided to the apparatus main body.

6. An image forming apparatus according to claim 1, wherein:
the information on the replacement part corresponding to the identification information is stored in a storage unit provided to a server;

the server is connected to the image forming apparatus through a network so that data can be sent to and received from the image forming apparatus; and

after the image forming apparatus acquires the identification information, the information acquisition unit acquires the information on the replacement part corresponding to the identification information from the storage unit provided to the server.

7. An image forming apparatus according to claim 1, further comprising an access unit that automatically accesses a server through a network in a case where identification information that is not stored in the storage unit of the apparatus main body is acquired.

8. An image forming apparatus according to claim 1, further comprising an update unit that periodically updates the information on the replacement part stored in the storage unit of the apparatus main body.

9. An image forming apparatus according to claim 1, further comprising a control unit that controls the apparatus not to operate in a case where the identification information of the replacement part mounted to the apparatus main body is compared with the identification information stored in one of the storage unit of the apparatus main body and a storage unit of a server with the result that the identification information of the replacement part mounted does not exist in the one of the storage unit of the apparatus main body and the storage unit of the server.

10. An image forming apparatus according to claim 1, wherein the apparatus main body further includes a control unit that controls the storage unit of the apparatus main body to store the information

on the usage state of the replacement part.

11. An image forming apparatus according to claim 1, wherein:
the apparatus main body further includes a control unit that controls the information on the usage state of the replacement part to be transmitted to a server through a network; and
the storage unit is included in the server and stores the information on the usage state of the replacement part.

12. An image forming apparatus according to claim 1, further comprising a control unit that, in a case where the replacement part is detached from the apparatus main body during usage thereof and mounted to the apparatus main body again, reads usage history information of the replacement part up to previous usage thereof is read from one of the storage unit of the apparatus main body and a storage unit of a server, and controls the usage history information to affect control of the image forming apparatus.

13. An image forming apparatus according to claim 1, further comprising a control unit that, in a case where the replacement part reaches a life end, controls information on an unusable state of the replacement part to be transmitted to one of a storage unit of the apparatus main body and a storage unit of a server.

14. An image forming apparatus according to claim 1, further comprising a control unit that controls the image forming apparatus not to operate in a case of acquiring the identification information of the replacement part that reaches a life end.

15. An image forming apparatus according to claim 1, further comprising a control unit that, in a case of acquiring the identification information of the replacement part that reaches a life end, controls one of a storage unit of the apparatus main body and a storage unit of a server to store a usage history information of the replacement part that reaches the life end.

16. An image forming apparatus according to claim 1, further comprising a control unit that, in a case of reconditioning the replacement part that reaches a life end, controls information on a usable state of the reconditioned replacement part to be transmitted to one of the storage unit of the apparatus main body and a storage unit of a server, and controls the one of the storage unit of the apparatus main body and the storage unit of the server to store a number of reconditionings.

17. An image forming apparatus which is connected through a network to a management server managing the image forming apparatus so that data can be sent to and received from the management server,

the image forming apparatus comprising a control unit that obtains information on an operating state of the image forming apparatus, transmits the information on the operating state of the image forming apparatus through the network to the management server, and manages the operating state of the image forming apparatus based on the data sent from the management server.

18. An image forming apparatus according to claim 17, further comprising:

at least one replacement part including a storage medium that can store information; and

an apparatus main body to which the replacement part is detachably mountable and which includes a communication unit that serves to communicate the information with the storage medium of the replacement part.

19. An image forming apparatus according to claim 17, further comprising a control unit that controls operational information of the image forming apparatus during usage of a replacement part, which includes a number of printed sheets, a usage environment, and a number of paper jams, to be stored in a storage unit provided to an apparatus main body, and to be transmitted to the management server upon replacing the replacement part.

20. An image forming apparatus according to claim 17, further comprising a control unit that controls operational information of the image forming apparatus during usage of the replacement part, which includes a number of printed sheets, a usage environment, a number of paper jams, and a trouble occurring state, to be continuously transmitted to the management server through the network.

21. An image forming apparatus according to claim 17, further comprising a control unit that controls an optimal operational condition of the image forming apparatus corresponding to identification information of a replacement part to be acquired through the network and to affect control of the image forming apparatus.

22. An image forming apparatus according to claim 17, further comprising a control unit that, when finishing using a replacement part, controls a notification of a receiver's address for sending the used replacement part to be made to a user based on identification information of the replacement part.

23. An image forming apparatus according to claim 17, further comprising a control unit that controls operation of the image forming apparatus to be permitted only when inherent information

corresponding to identification information of a replacement part is inputted by a predetermined method.

24. An image forming apparatus according to claim 17, further comprising inherent information corresponding to identification information of a replacement part which can be inputted from a personal computer connected to the image forming apparatus through the network.

25. An image forming apparatus according to claim 17, wherein permission to use the image forming apparatus corresponding to identification information of the replacement part can be selectively granted to a user connected to the network.

26. An image forming apparatus according to claim 17, further comprising a control unit that controls latest software for operating the image forming apparatus to be installed through the network.

27. An image forming apparatus according to claim 17, further comprising a control unit that, in a case where trouble occurs in the image forming apparatus, controls information thereof to be transmitted to a manufacturer through the network.

28. An image forming apparatus according to claim 17, further

comprising a control unit that controls diagnostics to be run on the image forming apparatus having trouble through the network.

29. An image forming apparatus according to claim 17, further comprising a control unit that controls a notification of information for solving trouble with the image forming apparatus to be made to a user through the network.

30. An image forming apparatus according to claim 17, wherein the server stores manufacture's change information on a replacement part, and includes a control unit that, when identification information of the replacement part is detected, controls a notification of the change information on a replacement part to be made to a user.

31. An image forming apparatus according to claim 17, further comprising a control unit that controls a life warning notification at the time when a replacement part reaches a life end to be changed into a predetermined time from a usage state of the replacement part.

32. An image forming apparatus according to claim 17, further comprising a control unit that, when the image forming apparatus is changed into a new generation model by replacing at least one

part with a new part, controls software corresponding to the new generation model to be installed.

33. A management method for a replacement part in which the replacement part detachably mountable to an apparatus main body is managed by communicating information through a communication unit between a control unit of the apparatus main body and a storage medium of the replacement part capable of storing the information, the method comprising:

storing identification information inherent to the replacement part into the storage medium of the replacement part;

in correspondence with the identification information, storing information for managing a usage state of the replacement part into a storage unit provided to an element other than the replacement part;

reading the identification information of the replacement part stored in the storage medium of the replacement part;

based on the identification information read from the replacement part, acquiring the information on a corresponding replacement part stored in the storage unit; and

based on the information on the corresponding replacement part acquired from the storage unit, managing a usage state of the replacement part.

34. A management program for a replacement part for allowing a computer to execute a process of managing the replacement part detachably mountable to an apparatus main body by communicating information through a communication unit between a control unit of the apparatus main body and a storage medium of the replacement part capable of storing the information, the method comprising:

reading identification information of the replacement part stored in the storage medium of the replacement part;

based on the identification information read from the replacement part, acquiring the information on a corresponding replacement part stored in a storage unit provided to an element other than the replacement part; and

based on the information on the corresponding replacement part acquired from the storage unit, managing a usage state of the replacement part.